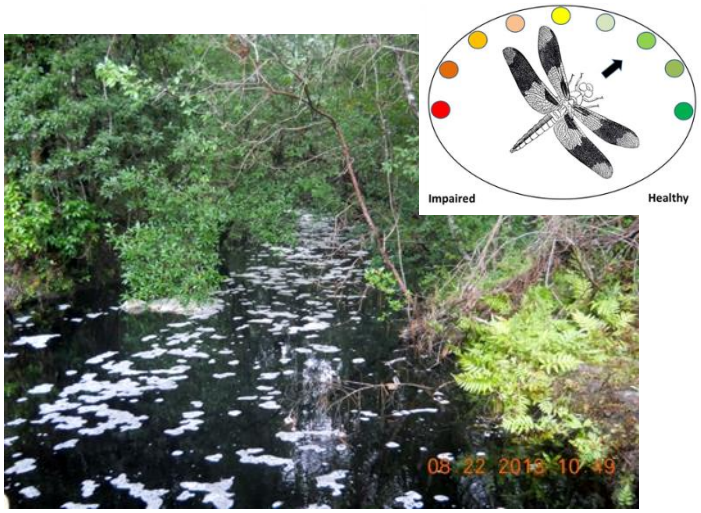
## Waterbody: Soapstone Creek



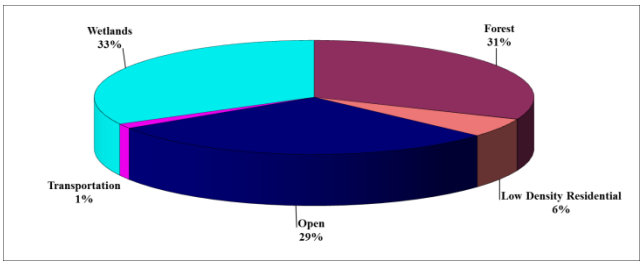

## Basin: Ochlockonee River

Soapstone Creek is a minimally disturbed, phosphorus-limited stream located in southwestern Leon County. The stream flows west, eventually reaching the Ochlockonee River, downstream of Lake Talquin.

Soapstone Creek is aptly named due to its tendency to have foam form on the water's surface giving it a "soap sudsy" appearance. While foam is sometimes associated with pollution, it naturally forms under certain conditions. In this case, foam is naturally formed when water surface tension is reduced as natural oils and organic compounds (i.e., tannins) are released into the water from the surrounding wooded and boggy areas and float to the surface. Turbulence introduces air into the water forming foam.

The culvert associated with the bridge spanning the creek frequently prevents the creek from flowing during low water conditions, preventing staff from sampling. Due to low water conditions, staff was only able to collect water quality samples intermittently from 2011 through 2014.

While the following pie chart shows the majority of the 5,301 acre watershed is relatively undeveloped, residential, and transportation uses make up approximately 7% of the watershed. Increases in stormwater runoff, and waterbody nutrient loads can often be attributed to these types of land uses.




**Background**

Healthy, well-balanced stream communities may be maintained with some level of human activity, but excessive human disturbance may result in waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. Water quality standards are designed to protect designated uses of the waters of the state (*e.g.,* recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

**Methods**

Surface water samples were collected to determine the health of Soapstone Creek and met the requirements of the Florida Department of Environmental Protection (FDEP).

**Results**

*Nutrients*

According to FDEP requirements, Numeric Nutrient Criteria (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. The nutrient thresholds and results are found in Table 1. Due to low water conditions, four temporally independent samples per year could not be collected from this station from 2011-2014. The State criteria were not exceeded for either parameter in the samples obtained.

**Table1.** FDEP's chlorophyll *a*, total nitrogen and phosphorus criteria for streams applied to Soapstone Creek.

| Soapstone Creek | Total Nitrogen Threshold 1.03 mg/L | Total Phosphorus Threshold 0.18 mg/L |
|---|---|---|
| **2008** | 0.64 | 0.01 |
| **2009** | 0.50 | 0.00 |
| **2010** | 0.51 | 0.01 |
| **2011- 2014** | - | - |

*Dissolved Oxygen*

As a result of low flow, the Class III criterion for dissolved oxygen was not met for the July 2014 sampling event.

*Other Parameters*

Other water quality parameters appear to be normal for the area and no impairments were noted.

**Conclusions**

Based on ongoing sampling, Soapstone Creek met the nutrient thresholds for the East Panhandle Region. As a result of low flow, the Class III criterion for dissolved oxygen was not met for the July 2014 sampling event. Other water quality parameters appear to be normal for the area and no impairments were noted.

Thank you for your interest in maintaining the quality of Leon County's water resources. Please feel free to contact us if you have any questions.

**Contact and resources for more information**

www.LeonCountyFL.gov/WaterResources

Click here to access the results for all water quality stations sampled in 2014.

Click here for map of watershed – Sample station Soapstone.

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